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(54) MODIFIED WOODY MATERIAL AND MODIFYING
METHOD FOR WOODY MATERIAL

(57) Abstract:

PURPOSE: To achieve stabilization of the size of the title material while maintaining its workability by impregnating the material with a polyacrylic acid/polyvalent metal salt and a thermosetting synthetic resin.

CONSTITUTION: A modified woody material is impregnated with a polyacrylic acid/polyvalent metal

salt and a thermosetting synthetic resin. The acrylic acid/polyvalent metal salt may be the acrylate of at least one member of polyvalent metals selected especially from among aluminum, zinc, copper and magnesium. The water-soluble precursor of the thermosetting synthetic resin is a precursor such as, for example, a urea resin, a melamine resin and a phenol resin, which has water-solubility. It may also be a prepolymer or the like, and a dimethylolethyleneurea is preferably used.

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137 139 140 147 157 175 18& 180 185 186 189 19- 191 198 20- 230 231
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689 691 720 723 726

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1214 1233 1235 1276 1277 1279 1517 1588 1731 1737 1756 2014 2020 2021
2024 2025 2043 2064 2066 2122 2152 2271 2288 2289 2295 2299 2300 2318
2432 2509 2604 2606 3152 3205 3268 3318

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AB - J03169504 Wood is modified by impregnating polyvalent metal polyacrylate salt and a thermosetting synthetic resin into the material.

- The metallic salt is pref. Al, Zn, Cu or Mg polyacrylate, used as aq. soln. in a concn. of 10 - 20 wt.%. Pref. used together with a water-soluble radically copolymerisable monomer (pref. polyethylene glycol methacrylate in concn. = 5-10 wt.%). The water-soluble precursor of thermosetting synthetic resin is e.g., a precursor of urea resin, melamine resin or phenol resin and pref. dimethylethylene urea and used in a concn. of 5 - 10 wt.%. The aq. soln. is blended with a radical initiator (e.g. a peroxide or an azo cpd.) and a condensing catalyst for the thermosetting resin (e.g., an alkanolamine) and pref. a surfactant (e.g., a quaternary ammonium salt in a concn. = up to 1 wt.%).
- ADVANTAGE - The modified material has high dimensional stability during drying and wetting. Has high putrefaction resistance and high resistance against the attack by insects and high sawing, planing and nailing workability. (5pp Dwg.No.0/3)

IW - MODIFIED WOOD MATERIAL IMPREGNATE POLYVALENT METAL POLYACRYLATE SALT THERMOSETTING SYNTHETIC RESIN WOOD HIGH DIMENSION STABILISED
IKW - MODIFIED WOOD MATERIAL IMPREGNATE POLYVALENT METAL POLYACRYLATE SALT THERMOSETTING SYNTHETIC RESIN WOOD HIGH DIMENSION STABILISED

NC - 001

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TI - Modifying wood material - by impregnating polyvalent metal

**polyacrylate salt and thermosetting synthetic resin into wood, for
high dimensional stability**